

THREE SPECIES OF COLEOSOMA FROM FLORIDA
(ARANEÆ; THERIDIIDÆ) ¹

BY ELIZABETH B. BRYANT

Among material recently sent the Museum of Comparative Zoology by Mr. George Nelson from Sebastian, Florida, were specimens of *Coleosoma flavipes* O.P.-Cambridge, described from males, and known only from the type localities in Mexico and Guatemala. Impressed by this discovery, I wrote to Dr. William M. Barrows, who has collected in Florida, and was gratified to receive in response *Coleosoma* collected by him at various times.

Among this material, I have identified not only *Coleosoma floridanum* Banks, the only species of the genus previously known from the state, but also both males and females of Cambridge's *C. flavipes* together with a male and females of an undescribed species, *C. normale* spec. nov. Of this material, *C. flavipes* Camb. and *C. normale* were taken in Florida in early summer. Cambridge does not mention dates in his descriptions. *C. floridanum* Banks proves to have a wide seasonal distribution, having been taken in mid-summer at Soledad, Cuba, and in November at Floreana in the Galapagos.

The female of *C. flavipes* is very unlike the male, as the abdomen extends in a prolongation above the spinnerets. In this respect it suggests Keyserling's figures of *Achæa* in his "Theridiidæ, 1884, 1, pl. 5."

The genus *Coleosoma* was based by O.P.-Cambridge in 1882 on the species *blandum* Camb. from Ceylon, also known only from the type, a male. Simon synonymized the genus with *Theridion*, a fact which has been the cause of some confusion. In 1884, Keyserling described and figured males, as *Coleosoma blandum* from the Marx Coll. taken at Enterprise, Florida. Mr. Banks noted the difference of his Florida specimens from the original description and in 1900, named the former *floridanum*. And in 1897, Simon reported as *Theridion blandum*, the

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Ceylon species, from St. Vincent, and casually stated that it was found in the tropics around the world. It is not improbable, that the species found on St. Vincent is either new, or one of the species found in Florida.

I wish to express here, my thanks to Mr. George Nelson for collecting at Sebastian; to Dr. William M. Barrows for generously allowing me to examine his collections from Fort Myers and to Mr. N. Banks for his encouragement and help.

Genus *Coleosoma* O.P.-Cambridge
Proc. Zool. Soc. London, 1882, p. 426.

Cephalothorax longer than broad, moderately convex, sloping gradually from eye area to posterior margin, thoracic groove punctiform; *eyes* rather small, anterior row recurved, eyes subequal and equidistant, posterior row procurved, lateral eyes touching; *clypeus* very high, convex; *mandibles* vertical, small and weak; *labium* wider than long; *maxillæ* narrow, inclined over labium; *abdomen* in male, long, usually constricted about middle, with a thin, bilobed, chitinized plate at anterior end that extends onto cephalothorax and continues on venter to about the middle of the abdomen; in female, the abdomen may be cylindrical, or produced in a tubercle above the spinnerets, the chitinized plate found in male, missing; *legs* in male, first pair very long.

Genotype; *Coleosoma blandum* Cambridge, male, Ceylon.

Coleosoma is separated from *Lithyphantes* by the higher, convex clypeus, slender mandibles, and the abdominal plate longer both on dorsum and venter. At present the genus consists of the genotype from Ceylon, and the three species described in this paper.

Coleosoma flavipes O.P.-Cambridge
Figures, 1, 4, 7, 9

Biol. Centr. Amer., 1895, 1:154, pl. 19, fig. 12. "♂ Teapa, in Tabasco, Mexico; Guatemala."

Male. Length, 2.1 mm., ceph. 0.6 mm., abd. 1.5 mm. long, 0.4 mm. wide.

Cephalothorax grayish-brown, more than two-thirds as wide as long, (4.0:5.5), posterior margin about one half that of

anterior, sides evenly rounded, slopes gradually from eye area to posterior margin, thoracic groove punctiform, posterior margin indented with a chitinized hump on each lateral lobe, probably on which the abdomen rubs; *eyes* cover two-thirds of head, seen from above, anterior row recurved, eyes small, subequal and equidistant, posterior row slightly procurved, so that lateral eyes touch, eyes subequal and equidistant; *quadrangle* narrower in front and as high as width behind; *clypeus* strongly convex, more than twice as high as eye area, with no groove below anterior eye row; *mandibles* small, weak, vertical; *labium* wider than long; *maxillæ* more than twice as long as labium, inclined, tips almost touching; *sternum* brown, more than two-thirds as wide as long, convex, triangular, widest between I coxæ; *abdomen* cylindrical, black, constricted posterior to middle with constriction marked by a narrow white band, anterior portion larger, at base a thin, chitinized plate or sheath that extends in two blunt points over cephalothorax, and is continued on venter to fold, which is posterior to middle, dorsum with a few long colorless hairs, venter black, spinnerets at tip; legs, 1-4-2-3, long and very slender, I pair more than twice as long as entire spider, yellow with a black line on femora, tip of IV tibia and base of metatarsus dark, no spines but lines of colorless hairs; *palpus* longer than cephalothorax, dark, terminal joint very broad, embolus starts from lateral margin above in distal half, and almost completes a circle, tip with an abrupt turn, at end, a wide dark piece with an uneven tip.

Female. Length, 1.7 mm., ceph. 0.7 mm., abd. 1.0 mm.

Cephalothorax not as wide as in male, a dull brown, with a narrow black marginal line; *eyes* same as in male; *abdomen* a dull gray, with a median dark stripe from pedicel to tip, sides a dull gray, abdomen prolonged in a slender conical projection, so that height above spinnerets equals length on venter from pedicel to spinnerets, venter dull gray from pedicel to spinnerets, fold much nearer pedicel than in male; *legs*, long, slender, pale; *epigynum*, area not quite as long as wide, two dark tubes beneath the skin, close together at anterior end, but separating near fold where a short median dark tube can be seen.

Allotype ♀ Florida; Fort Myers, 25 June 1941, M. C. Z. Coll.

2 ♂ Florida; Sebastian, March 1944, (Nelson)

♂ s ♀ s Florida; Fort Myers, 25 June 1941, Barrows Coll.

The specimens collected by Dr. Barrows at Fort Myers, show great variation in color among the males. Some have the cephalothorax pale yellow and the abdomen almost white with parallel stripes of gray; these have the legs about the same color as the cephalothorax, and either no dark stripe on the femora, or the stripes very indistinct. Other males are very dark, with the abdomen black as described by Cambridge, and the legs with dark lateral lines on the femora. All however, have the abdomen constricted just beyond the middle and a very broad palpus with the same corresponding parts. The females vary as much as the males. In some the abdominal tubercle above the spinnerets is reduced to a slight hump, while in others the tubercle is long, slender and pointed. All have the median dark line on the abdomen and the epigynum is the same. The coloring also varies. Some are quite dark with a darker median line on the abdomen; others are pale with the dark median line. The legs are usually white.

A lateral view of the abdomen of the female suggests some of the figures of *Achæa* given by Keyserling in the *Theridiidæ*, 1884, vol. 1, pl. 5.

Coleosoma floridanum Banks

Figures, 3, 6

Can. Ent., 1900, 32: 98. "2 ♂ Florida; Punta Gorda."

Theridion interruptum Banks, Can. Ent., 1908, 40: 205, fig. 9. "♀ Miami; Florida." (immature)

Male. Length, 2.0 mm., ceph. 0.6 mm., abd. 1.6 mm.

Cephalothorax brown, about two-thirds as wide as long, anterior and posterior margins about equal in width, sides evenly rounded, rather flat, slopes gradually from eye area to posterior margin, two small dark lobes near posterior margin, thoracic groove punctiform; *eyes* about cover anterior margin, anterior row slightly recurved, eyes equidistant, a.m.e. smallest of the eight, posterior row straight, eyes equidistant, lateral eyes touching on a low tubercle; *quadrangle* narrower in front, and as high as wide behind; *clypeus* vertical, slightly convex, with a groove below anterior eye row, about twice as high as eye area; *mandibles* vertical, small, weak; *labium* wider than long, fused to sternum; *maxillæ* fully twice as long as labium, inclined but tips not touching; *sternum* as wide as long, convex, dark about

margins; *abdomen* more than twice as long as wide, constricted posterior to middle, but constriction not as deep as in *C. flavipes* and divisions not as globose, anterior portion largest, pale brown, with lateral dark stripes which end before the constriction, a pair of irregular cream-color blotches on posterior slopes, constriction pale, posterior portion black with no markings, at the base, a thin, chitinized plate or sheath that extends in two blunt points over cephalothorax and extends on venter to fold which is posterior to middle, venter pale; *legs* much broken, 1-4-2-3, pale, a dark line on posterior femora, tip of IV tibia and base of IV metatarsus dark, I pair about one and a half times length of spider, no spines, but lines of long hairs; *palpus* not as long as cephalothorax, pale, embolus much shorter than in *C. flavipes*, embolus starts from near base and completes about half a circle, the dark piece at tip quite narrow, extends beyond the cavity, below a larger pale piece also extends beyond the cavity.

Female. Length, 1.8 mm.

Cephalothorax and *eyes* same as in male; *abdomen* cylindrical, three-quarters as wide as long, overlapping cephalothorax, but with no chitinized plate as in male, two widely separated, parallel dark stripes broken about middle, with paired white flecks in area between, pale flecks on sides; *legs*, 1-2-4-3, pale, with a dark ring at distal end of tibiae and distal end of IV femur, rows of bristles on all joints and a long dorsal bristle on tibiae; *epigynum*, a broad median septum with large openings each side.

Holotype 2 ♂ Florida; Punta Gorda, (Mrs. Slosson), Banks Coll.

Allotype ♀ pullus, Florida; Miami, February-March 1903, (Comstock), Banks Coll.

3 ♂ s 1 ♀ Florida; Fort Myers, February 1930, Barrows Coll.

♂ s ♀ s Cuba; Havana, Banks Coll.; Soledad, July-August, 1931, (Banks and Worley)

1 ♂ ♀ s Galapagos Islands; Floreana, 12-14 November, (Norge Exped.)

The male of *Coleosoma floridanum* is easily separated from the other two species of the genus, as the embolus completes about half a circle instead of almost a complete circle. The

female can be separated from the other two, by the much simpler epigynum. The parts of the epigynum are very lightly chitinized in all the specimens seen but apparently are the same in all specimens from Cuba or from the Galapagos Islands. The specimen figured is from Fort Myers, Florida.

Coleosoma normale spec. nov.

Figures, 2, 5, 8, 10

Male. Length, 1.5 mm., ceph. 0.5 mm., abd. 1.1 mm.

Cephalothorax pale, with a narrow dark marginal line and shaded with gray posterior to eyes, rather low and flat, three-quarters as wide as long, anterior margin much narrowed; *eyes* about cover anterior margin, anterior row recurved, eyes subequal, a.m.e. diurnal, separated by less than a diameter, little nearer to a.l.e., posterior row about straight, eyes equidistant, p.m.e. largest separated by more than a diameter, lateral eyes touching; *clypeus* vertical, only slightly convex, less than twice the eye area; *mandibles* pale, vertical, weak; *labium* pale, wider than long; *maxillae* inclined; *sternum* triangular, dark about margins; *abdomen* pale, with two parallel dark stripes from base to spinnerets, stripes quite narrow about middle and heavier at ends, cylindrical, about half as wide as long, no indication of a constriction, chitinized basal plate narrow but divided at base into two blunt points and extends on venter to about the middle, venter pale yellow, margined with black, black about spinnerets; *legs*, broken, pale, with no indications of dark stripes or rings, no spines; *palpus* about as long as cephalothorax, pale, terminal joint very large, broad, embolus starts from side near tip, follows contour to tip, forming almost a complete circle, a pale club-shaped piece opposite bulb rests against the large black conspicuous piece at tip of bulb.

Female. Length, 1.6 mm., ceph. 0.5 mm., abd. 1.3 mm.

Cephalothorax and *legs* same as in male; *abdomen* cylindrical, with no indication of the chitinous plate found in male, pale, with two widely separated parallel dark stripes from base to spinnerets as in male, venter with median dark gray spot that reaches spinnerets; *epigynum* large for the size of the spider, a convex chitinized plate, beneath which can be seen the convolute tubes that almost touch at anterior end and are widely separated at posterior.

Holotype ♂ Florida; Fort Myers, 25 June 1941, M. C. Z. Coll.

Allotype ♀ Florida; Fort Myers, 25 June 1941, M. C. Z. Coll.

Paratype ♀ Florida; Fort Myers, 25 June 1941, Barrows Coll.

The male of this species has no constriction of the abdomen and the thin chitinous plate at the anterior end of the abdomen is much shorter in proportion than in the other two species. The female has the same markings on the abdomen and lacks the chitinized plate at the anterior end. The epigynum is similar to that of *C. flavipes* Camb. but the openings are widely separated.

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EXPLANATION OF PLATE I

- Fig. 1. *Coleosoma flavipes* Camb., epigynum.
Fig. 2. *Coleosoma normale* spec. nov., epigynum.
Fig. 3. *Coleosoma floridanum* Banks, epigynum.
Fig. 4. *Coleosoma flavipes* Camb., left palpus.
Fig. 5. *Coleosoma normale* spec. nov., left palpus.
Fig. 6. *Coleosoma floridanum* Banks, left palpus.
Fig. 7. *Coleosoma flavipes* Camb., lateral view of abdomen, female.
Fig. 8. *Coleosoma normale* spec. nov., lateral view of abdomen, female.
Fig. 9. *Coleosoma flavipes* Camb., lateral view of abdomen, male.
Fig. 10. *Coleosoma normale* spec. nov., lateral view of abdomen, male.

